Claims

1. A method for yielding a virtual processor within a logically partitioned data processing system, wherein the system supports a plurality of partitions, a first of which includes a plurality of virtual processors that share at least one CPU, the method comprising:

requesting with a yielding virtual processor a yield of the CPU upon which the virtual processor is executing, including designating a target virtual processor from among the plurality of virtual processors; and

switching-in the target virtual processor for execution by the CPU in response to the requested yield.

2. The method according to claim 1, wherein the target virtual processor requires access to the CPU, wherein the yielding virtual processor controls the CPU.

3. The method according to claim 1, further comprising generating a yield command from the virtual processor, wherein the yield command includes pointer and status information regarding the target virtual processor.

4. The method according to claim 1, further comprising assigning status information to the target virtual processor.

5. The method according to claim 1, further comprising assigning a target count to the target virtual processor.

6. The method according to claim 5, further comprising comparing the target count to a presented count conveyed in the yield command.

7. The method according to claim 1, further comprising aborting the yield in response to a yield-to-active command.

8. The method according to claim 1, further comprising designating the yielding virtual processor as waiting for the target processor.

9. The method according to claim 1, further comprising designating the target virtual processor as having a yielding processor waiting for the target virtual processor.

10. The method according to claim 1, further comprising storing the state of the yielding virtual processor.

11. An apparatus comprising:

a logically partitioned computer including a plurality of logical partitions, a first of which including a plurality of virtual processors that share at least one CPU; and

a program resident in the computer, the program configured to initiate a request for a yield of a CPU controlled by a yielding virtual processor, wherein the request designates a target virtual processor from among the plurality of virtual processors; and further configured to logically reassign control of the CPU from the yielding virtual processor to the target virtual processor.

12. The apparatus according to claim 11, wherein the target virtual processor requires access to the CPU, wherein the yielding virtual processor controls the CPU.

13. The apparatus according to claim 11, wherein the program initiates generation of a yield command from the virtual processor, wherein the yield command includes pointer and status information regarding the target virtual processor.

14. The apparatus according to claim 11, wherein the program initiates an assignment of a target count to the target virtual processor.

15. The apparatus according to claim 14, wherein the program initiates a comparison of the target count to a presented count conveyed in the yield command.

16. The apparatus according to claim 11, wherein the program initiates abandonment of the yield in response to a yield-to-active command.

17. The apparatus according to claim 11, wherein the program initiates a designation of the yielding virtual processor as waiting for the target processor.

18. The apparatus according to claim 11, wherein the program designates the target virtual processor as having a yielding processor waiting for the target virtual processor.

19. A program product, comprising:

(a) a program configured to initiate a request for a yield of a CPU controlled by a yielding virtual processor among a plurality of virtual processors in a logically partitioned data processing system, wherein the request designates a target virtual processor from among the plurality of virtual processors; and further configured to logically reassign control of the CPU from the yielding virtual processor to the target virtual processor.

(b) a signal bearing medium bearing the first program.

20. The program product of claim 19, wherein the signal bearing medium includes at least one of a recordable medium and a transmission-type medium.